

## AMENDMENTS TO THE CLAIMS

### Listing of Claims

1. (original) A controlled, magnetohydrodynamically-driven, fluidic network, comprising:

(a) a plurality of connected and individually controlled conduits for the transmission of an at least slightly conductive fluid each conduit having at least one pair of opposing walls and at least one pair of electrodes disposed along the opposing walls; and

(b) at least one electrode controller in operational engagement with the electrodes for implementing an activation sequence of currents or potentials applied across the electrodes.

2. (original) The network of claim 1 further comprising an algorithm for determining the activation sequence.

3. (original) The network of claim 1, comprising a plurality of ceramic tapes co-fired into a unitary structure.

4. (original) The network of claim 1 wherein the conduits are arrayed in two dimensions.

5. (original) The network of claim 1 wherein the conduits are arrayed in three dimensions.

6. (original) The network of claim 1 wherein the conduits are spatially defined by the arrangement of the electrodes.

7.-11. (canceled)

12. A controlled, magnetohydrodynamically-driven thermal cyclers comprising the fluidic network of claim 1 positioned at least partially across a temperature gradient.

13.-21. (canceled)